

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application and indicating that claims 2-7 contain allowable subject matter.

Disposition of Claims

Claims 1-8 were pending in this application. By way of the Reply of March 10, 2005, claim 8 was withdrawn from consideration. By way of this Reply, claim 8 has been cancelled without prejudice or disclaimer and claims 9-14 have been added. Thus, claims 1-7 and 9-14 are pending in this application. Claims 1 and 9 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 9.

Claim Amendments

Claim 1 has been amended in this Reply to clarify the present invention recited. Support for this amendment may be found in, for example, Fig. 1. No new matter has been added.

New claims 9-14 have been added in this Reply. Support for these amendments may be found in, for example, the original claims and Fig. 1. No new matter has been added.

Rejection(s) under 35 U.S.C § 102

Claims 1-7 stand rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,396,372 ("Sakata et al.") For the reasons below, the rejection is respectfully

traversed.

Independent claim 1, as amended, recites a structure of a contact switch driven by electrostatic attraction. Specifically, as shown in, for example, Figs. 1 and 2, a contact switch of the present invention includes a substrate 2, two signal lines 4 and 5 disposed on the substrate 2, a fixed electrode 3 covered with an insulating film 7, and a movable electrode 13 facing the fixed electrode 3. The signal lines 4 and 5 have fixed contacts 4a and 5a disposed on ends thereof respectively, and the movable electrode 13 has a movable contact 18 facing the fixed contacts 4a and 5a. The movable contact 18 comes into contact with the fixed contacts 4a and 5b when the movable electrode 13 is displaced to the fixed electrode 3 based on electrostatic attraction caused by applying a predetermined voltage to therebetween, and thereby the signal lines 4 and 5 are electrically connected with each other. It is noted that a thickness of the fixed contacts 4a and 5a is smaller than that of the signal lines 4 and 5. In view of the above, claim 1, as amended, includes a limitation of “a film thickness of the first contact is smaller than a film thickness of the pair of signal lines.”

Sakata et al., in contrast, fails to show or suggest at least the above limitation as recited in claim 1. Sakata et al. merely discloses an electrostatic micro relay having fixed contact configured to have the same thickness as signal lines. Specifically, as shown in Fig. 1A, 1B and 4, wiring patterns 17a and 18a disposed on a glass substrate 11a have fixed contacts 13 and 14 at ends thereof, respectively. The Examiner asserts, in the Office Action, that a fixed electrode 12 is equivalent to a signal line as recited in claim 1. However, this is incorrect. The wiring patterns 17a and 18a correspond to the pair of the signal lines as recited in claim 1. The wiring patterns 17a and 18a are insulated from the fixed electrode 12. In Skata et al., a movable electrode 25 is displaced to a fixed electrode

12 by electrostatic attraction, and thereby a movable contact 28 comes into contact with the fixed contacts 13 and 14 to make a closed circuit. Shown in Fig. 1B are the wiring patterns 13 and 14, and the fixed electrode 12 coated with an insulating film 15. There exists nothing in Sakata et al. that shows or suggests a thickness of the fixed contacts 13 and 14 is smaller than that of the wiring patterns 17a and 18a.

In view of the above, Sakata et al. fails to show or suggest the present invention as recited in independent claim 1. Thus, claim 1 is patentable over Sakata et al. Dependent claims 2-7 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-7 stand rejected under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent No. 6,828,888 ("Iwata et al.") For the reasons below, the rejection is respectfully traversed.

Iwata et al. also discloses a micro relay driven by electrostatic attraction. Iwata et al., however, fails to show or suggest the limitation of "a film thickness of the first contact is smaller than a film thickness of the pair of signal lines" as recited in claim 1.

Specifically, as shown in Figs 3-5, signal lines 54 and 55 disposed on a fixed substrate 51 have stationary contacts 52 and 53 at ends thereof, respectively. The elements 57a and 58 noted by the Examiner are not signal lines as recited in claim 1, but rather are a base or base unit. The base 57a and the base unit 58 would correspond to anchors 11a and 12a of the movable electrode 13 of the embodiment disclosed in the present application. As is apparent from Fig. 3 (or Fig. 5), the stationary contacts 52 and 53 have the same thickness as the signal lines 54 and 55. There exists nothing in Iwata et al. that shows or

suggests a thickness of the stationary contacts 52 and 53 is smaller a thickness of the signal lines 54 and 55.

In view of the above, Iwata et al. fails to show or suggest the present invention as recited in independent claim 1. Thus, claim 1 is patentable over Iwata et al. Dependent claims 2-7 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.


Further, new independent claim 9 includes a similar limitation to claim 1. Specifically, new claim 9 includes a limitation of “a plurality of signal lines disposed on the substrate and having a plurality of first contacts respectively, wherein the plurality of first contacts are arranged to face each other and configured to be thinner than portions of the plurality of signal lines other than the plurality of first contacts.” As discussed above, neither Sakata et al. nor Iwata et al. shows or suggests that first contacts have different thickness from signal lines. Thus, claim 9 is patentable over Sakata et al and Iwata et al. New dependent claims 10-14 are allowable for at least the same reasons. Accordingly, entry and allowance of new claims 9-14 are respectively requested.

Conclusion

Applicant believes this Reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 15115.101001).

Dated: 8/9/05

Respectfully submitted,

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